

CLAIMS

1. Image display apparatus comprising projector means, optical means for splitting incident light, a first modulator for modulating red light, a second modulator for modulating green light, a third modulator for modulating blue light, optical means for recombining the modulated red, green and blue light, a fourth modulator for modulating the combined modulated red light, green light and blue light, and control means for controlling the operation of the first, second, third and fourth modulators such that the dynamic range of the image display apparatus is enhanced.
2. Image display apparatus according to claim 1 in which the control means is such that the first modulator, second modulator and third modulator are controlled as a function of red, green and blue video signals, and the fourth modulator is controlled as a function of the red, green and blue video signal to the first, second and third modulators.
3. Image display apparatus according to claim 1 in which the control means is such that the first modulator, second modulator and third modulator are controlled as a function of the highest video signal of the red, green and blue video signals, and the fourth modulator is controlled as a function of the highest video signal of the red, green and blue video inputs to the first red modulator, second green modulator and third blue modulator.

4. Image display apparatus according to claim 1 in which the optical means for splitting and combining the light comprises one or more beamsplitters.
5. Image display apparatus according to claim 1 in which the optical means for splitting the light and the optical means for recombining the light are essentially the same optical means.
6. Image display apparatus according to claim 1 in which the modulators for modulating light are all of the same type.
7. Image display apparatus according to claim 1 in which the modulators are all reflective type modulators for modulating light.
8. Image display apparatus according to claim 1 in which the modulators for modulating light are liquid crystal on silicon modulators for modulating light.
9. Image display apparatus according to claim 1 in which the modulators are all transmissive type modulators for modulating light.
10. Image display apparatus according to claim 1 in which the modulators are one or more different types of modulators for modulating light.